

REMARKS

Claims 4-19 and 21 are presently pending in the application.

Applicants wish to thank the Examiner for the courtesy of the personal interview at the U.S. Patent and Trademark Office granted to Applicant's undersigned attorney on August 29, 2003. As indicated in the Examiner Interview Summary, it was agreed that the above Amendments, which were discussed at the interview, would overcome the Examiner's rejections under 35 U.S.C. § 112, first and second paragraphs. In addition, at the interview the prior art rejections of the Examiner were discussed, as summarized and supplemented below. In particular, the Examiner requested more information to illustrate the prior art fluidized beds, since the references relied upon do not include drawings, thus making it difficult to understand exactly what is being taught by the prior art.

In paragraphs 3 and 6 of the Office Action the Examiner has objected to and rejected claim 7 as being informal and indefinite. Claim 7 has been amended as suggested by the Examiner in order to obviate the objection and rejection.

In addition, claim 4 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in the term "one or more other materials" in lines 11-12. While it is noted that this term was not objected to in original claim 1, claim 4 has been amended to delete this term, and step (d) now refers to supplying material components comprising a binder and/or water, which leaves open the possible inclusion of other components without the use of the indefinite term. Claims 8-12 have been amended to conform to this amendment to claim 4 (d). In addition, at the interview the Examiner requested that claim 11 be amended to proper Markush group form, and this has now been done also.

The Examiner has also rejected claims 4-19 and 21 under 35 U.S.C. § 112, first paragraph, as being enabling only for industrial detergents or industrial detergent components. While Applicant's respectfully traverse this rejection, since it is related to the use of the process and not the particular process steps, claim 4 has been amended to refer to the manufacture of detergents or detergent components. Claim 20 has therefore been cancelled, and claim 21 has been accordingly amended to depend from claim 4 instead of claim 20.

No new matter has been added by these amendments, since they are supported by the original specification and claims. Moreover, no new issues have been raised by the amendments and the amendments significantly simplify the remaining issues in the Office Action, since they specifically respond to and obviate the formal objection and rejections under 35 U.S.C. § 112. Accordingly, entry of the amendments after final is appropriate and respectfully requested.

The Examiner has rejected claims 4-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,516,447 of Bauer, *et al.* ("Bauer") in view of U.S. Patent 4,734,290 of Meyer for the reasons of record. In addition, the Examiner has rejected claims 4-21 under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as obvious over, U.S. Patent 5,814,501 of Becker, *et al.* ("Becker") for the reasons of record. In response to Applicant's arguments in the previous response, the Examiner notes that Bauer teaches a particularly preferred embodiment wherein the process is carried out continuously in a fluidized bed (column 6, lines 50-55), and that in each of the examples of Becker, particularly example 5, only one apparatus is used for all of the different processes until an extremely low dust product is obtained.

In making these rejections, it is submitted that the Examiner has overlooked or disregarded an important feature of the presently claimed invention, in particular step (c) of claim 4 wherein a different process air stream is provided by each of at least two chambers in an air inflow area beneath the fluidizing space. As discussed at the interview and set forth in more detail below, none of Bauer, Meyer or Becker teaches or suggests a process in which different process air streams are provided by each of at least two chambers in an air inflow area beneath the fluidizing space. Accordingly, the rejections are again respectfully but strenuously traversed for reasons set forth in previous Office Actions and the additional reasons set forth below.

As pointed out in the response to the previous Office Action (see Remarks at page 6), the specific examples in each of the prior art patents relied upon used apparatus of Glatt GmbH, the Assignee of the present application, or one of its related companies. Accordingly, Applicants are intimately aware of the mode of operation of these prior art processes, at least in so far as they use Glatt apparatus.

It is true that Bauer discloses in one preferred embodiment (see bottom of col. 6) a continuously operating fluidized bed. However, the continuous operation in no way implies or entails that the different process streams be provided by way of at least two chambers in the air inflow area for the different process steps, as presently claimed. Instead, Bauer merely provides that the different constituents of the surfactant formulation may be introduced into the fluidized bed through a multi-bore nozzle or through several nozzles. The Examiner questioned how the different temperature airflows (described at the top of col. 7) come into the fluidized bed. However, it is submitted that there is only one fluidizing airflow described there, namely air which at the base plate is preferably between 80°C and 400°C, which is then cooled by heat loss and by heat of evaporation of the constituents of the liquid component, so that the fluidizing air just above the base plate, and the air exit temperature are different, as indicated, due to cooling and evaporation.

At the interview, Applicant's undersigned attorney pointed to U.S. Reissue Patent No. Re. 32,307 of Glatt, *et al.* as an example of a Glatt fluidized bed apparatus. Note the single air-stream chamber below the perforated bottom 5 (see Figs. 1, 2a, 2b).

Enclosed for the Examiners' further information is a copy of an abridged version an article authored by two of the inventors of the Bauer patent from around the same time as the Bauer application (Jochen Jacobs et al., "Granulation of Detergent Components in a Fluidized Bed Dryer," originally published in *Verfahrenstechnik* [Process Technology], 28/11 (1994) 32, and abridged in *Henkel-Referate* 31/1995, pages 52-56). Fig. 1 at page 53 of this article shows a schematic diagram of the construction and mode of operation of a fluidized bed granulation dryer of the general type apparently used in the Bauer patent. This article refers to an AGT 1500 fluidized bed (see bottom left hand cols. at pages 53 and 55).

Also enclosed for the Examiners' information is a Glatt brochure published in October 2000, entitled "Innovative Technologies for Granules and Pellets" and describing various Glatt apparatus including the GF fluidized bed and the AGT granulation dryers of Glatt. As can be seen in the enclosed Jacobs article and at page 6 of the Glatt brochure, the AGT continuous granulation dryers are vertical chamber fluidized beds with a single process stream chamber below the bed, in contrast to the GF fluidized beds used in the presently claimed invention (see pages 5 and 12 of the Glatt brochure), which are essentially horizontally oriented fluidized beds with multiple process air-stream chambers provided below the fluidizing space.

Becker teaches a batch spray-coating process using a fluidized bed dryer, as discussed at col. 3, lines 30-63. As made clear in the Examples of Becker, these are batch, not continuous processes. See, for example, Example 5, where the coater was first loaded and the seed cores were sprayed (col. 7, lines 15-20), the fluidized bed was then shut down and the bowl temporarily removed and the machine was cleaned (col. 7, lines 28-29), and an over-coating step was then carried out in the same dryer/coater unit (col. 7, lines 29-31).

All of the other Examples of Becker use various types of Glatt granulators or spray-coaters, such as shown in the enclosed Glatt brochure entitled "Innovative Technologies for Granules and Pellets." This brochure illustrates, for example, the Glatt WSG and GPCG granulators used in Examples 6-8 of Becker (see particularly page 13 of the Glatt brochure, and the lower left hand corner of page 13, which illustrates the principle of top spray-coating with the WSG and GPCG units). Note, again, that these are vertical chamber fluidized beds having a single process air chamber below the fluidizing space.

Finally, Meyer uses a Glatt GPCG fluidized coater/granulator (see col. 2, lines 39-50), but agglomeration is minimized (less than 10%), see col. 2, lines 45-50 and col. 3, lines 30-37. The GPCG apparatus is a vertical chamber fluidized bed (as shown in the left hand column of page 13 of the Glatt brochure), not horizontal as presently claimed. Note that Meyer states at col. 2, lines 41-42, that the GPCG coater/granulator is similar to an apparatus marketed by Aeromatic, Inc. (this is the apparatus described in Example 5 at col. 7 of Becker). Moreover, Meyer uses a batch process (see col. 2, lines 51-55).

In sum, all of the prior art references relied upon by the Examiner in her rejections use essentially vertically oriented fluidized bed chambers, with a single process air chamber below the fluidizing space. Accordingly, none of the three patents used in these rejections teaches or suggests the presently claimed invention. Reconsideration and withdrawal of the rejections are therefore respectfully requested.

In view of the above Amendments, it is submitted that all of the claims fully comply with the requirements of 35 U.S.C. § 112, and in view of the above Remarks, it is submitted that all of the claims patentably distinguish over the three prior art references relied upon by the Examiner. Accordingly, reconsideration and an early Notice of Allowance are respectfully solicited.

Respectfully submitted,
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Enclosures: Petition for Extension of Time (one month)
Jacobs et al. Reprint "Granulation of Detergent Components
in a Fluidized Bed Dryer"
Glatt brochure "Innovative Technologies for Granules and Pellets"